FIG. 1

FIG. 2

FIG. 3

FIG. 4

FIG. 5

FIG. 6

FIG. 7

FIG. 8

FIG. 9

212

Form a First Hard Mask Layer on a Layer to be Patterned on a Substrate; and Form an Anti-Reflective Coating (ARC) on the First Hard Mask Layer

210

216

Coat the ARC with a Layer of Photosensitive Material (First Photosensitive Layer)

220

Pattern and Etch the First Photosensitive Layer to Form a Line including a Minimum Lateral Dimension and a Minimum Size Opening in the First Photosensitive Layer

224

Etch the ARC and the First Hard Mask Layer to Form a Line including a Minimum Lateral Dimension and a Minimum Size Opening in the First Hard Mask Layer; and Resist Strip the Remaining First Photosensitive Layer

228

Deposit and Pattern a Second Layer of Photosensitive Material (Second Photosensitive Layer) to Mask the First Region and to Expose the Second Region

232

Use the First Hard Mask to form a Line and Space Pattern in the Layer to be Patterned in the Second Region; At Least one Line in the Second Region Includes a Dimension Achievable by Lithography Processes Alone; and Remove the Remaining Second Photosensitive Layer

236

Deposit a Conformal Second Hard Mask Layer on an Intermediate Structure

240

Form Sidewall Spacers on the Vertical Walls of the First Hard Mask in the First Region to Reduce the Opening Size in the First Hard Mask in the First Region; Simultaneously, Form Sidewall Spacers on the Vertical Walls of the Lines in the Second Region

244

Deposit and Pattern a Third Layer of Photosensitive Material (Third Photosensitive Layer) to Expose the First Region and to Mask the Second Region

248

Etch the Layer in the First Region to Form an Opening Including a Dimension Less Than Possible by Lithography Processes Alone in the First Region

FIG. 10